

Departmental Annual Report - 3

Departmental Activities: Curriculum and Beyond

Department: Chemistry

Year: 2018-2019 (for the period 01-07-2018 to 30-06-2019)

Staff Advisors: Dr Bani Roy and Dr. Malti Sharma

Office Bearers:

| President | Vice President | General Secretary | Joint Secretary |
|---------------|----------------|----------------------|------------------|
| Priyanka Jain | Surbhi Sharma | Nikita Grover | Kajal Srivastava |

Part B.1

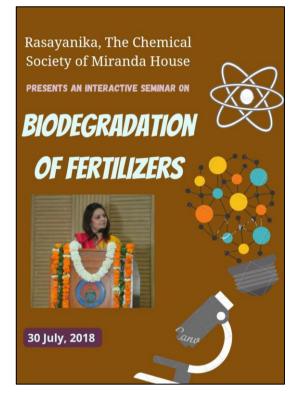
Seminars/conferences/workshops conducted by the Department

The Department of Chemistry organized Interactive Seminar with MH alumna Ms Shweta Jain, currently chemistry teacher at IB School, Bangkok, Thailand.





The Department of Chemistry organized Interactive Seminar: Biodegradation of Fertilizers by Dr Poonam, Department of Chemistry, Miranda House on 30 July, 2018.

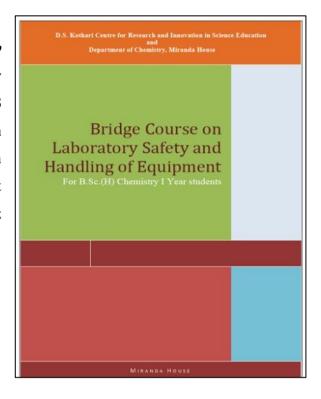


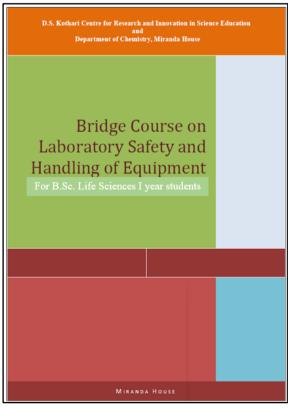
The Department of Chemistry organized Interactive Seminar: Computational Chemistry by Dr Smriti Sharma, Department of Chemistry, Miranda House





As per the practice in recent years, a Bridge Course on *Lab Safety and Handling of Equipment* for B.Sc. (H) Chemistry and Life Sciences I Year students was organised on 2-3 August 2018. It attempted to bridge the gap between laboratory practices in school and college. It was much appreciated by the freshers, for many of whom it was a first exposure to advanced lab equipment. A Lab Safety Quiz was held for the participants at the end of the course.







Details of students enrolled:

| Chemistry Honours students | | | | |
|----------------------------|---------------------|----------|---------------|--|
| S.No. | Student Name | Roll No. | Course Name | |
| | 1 Aadya | 252 | B.Sc (H) I Yr | |
| | 2 Amisha | 861 | B.Sc (H) I Yr | |
| | 3 Anamika | 1333 | B.Sc (H) I Yr | |
| | 4 Ankita Meena | 396 | B.Sc (H) I Yr | |
| | 5 Anshul Yadav | 215 | B.Sc (H) I Yr | |
| | 6 Anushka Chaudhary | 128 | B.Sc (H) I Yr | |
| | 7 Aprajita Sood | 55 | B.Sc (H) I Yr | |
| | 8 Archana Kumari | 300 | B.Sc (H) I Yr | |
| | 9 Arju | 659 | B.Sc (H) I Yr | |
| 1 | 0 Ashmita Bodh | 342 | B.Sc (H) I Yr | |
| | 1 Bhumika Rani | 461 | B.Sc (H) I Yr | |
| 1 | 2 Chailsi | 530 | B.Sc (H) I Yr | |
| 1 | 3 Changni Yanschang | 36 | B.Sc (H) I Yr | |
| 1 | 4 Daya K | 3 | B.Sc (H) I Yr | |
| 1 | 5 Fiza Madar | 1518 | B.Sc (H) I Yr | |
| 1 | 6 Garima | 691 | B.Sc (H) I Yr | |
| 1 | 7 Gariyashi Deka | 58 | B.Sc (H) I Yr | |
| 1 | 8 Hemlata | 969 | B.Sc (H) I Yr | |
| 1 | 9 Himani Kashyap | 717 | B.Sc (H) I Yr | |
| 2 | 0 Himanshi | 40 | B.Sc (H) I Yr | |
| 2 | 1 Hitakshi Mathur | 1270 | B.Sc (H) I Yr | |
| 2 | 2 Jyoti | 1411 | B.Sc (H) I Yr | |
| 2 | 3 Kavita | 1266 | B.Sc (H) I Yr | |
| 2 | 4 Khushboo Goel | 651 | B.Sc (H) I Yr | |
| 2 | 5 Km Akanksha | 865 | B.Sc (H) I Yr | |
| 2 | 6 Kunja Anitha | 201 | B.Sc (H) I Yr | |
| 2 | 7 Kusum | 1233 | B.Sc (H) I Yr | |
| 2 | 8 Lakshita | 1287 | B.Sc (H) I Yr | |
| 2 | 9 Mansi Sharma | 1320 | B.Sc (H) I Yr | |
| 3 | 0 Mereddy Siri | 4 | B.Sc (H) I Yr | |
| 3 | 1 Monika | 488 | B.Sc (H) I Yr | |
| 3 | 2 Monika Yadav | 658 | B.Sc (H) I Yr | |
| 3 | 3 Muskaan | 1427 | B.Sc (H) I Yr | |
| 3 | 4 Narsagalla Sheela | 860 | B.Sc (H) I Yr | |
| | 5 Neeharika Singh | 331 | B.Sc (H) I Yr | |
| | 6 Ojaswita Pant | 855 | B.Sc (H) I Yr | |
| 3 | 7 Pooja | 490 | B.Sc (H) I Yr | |
| 3 | 8 Pooja Meena | 140 | B.Sc (H) I Yr | |



| 39 | Pooja Yadav | 17 | B.Sc (H) I Yr |
|----|----------------------|------|---------------|
| 40 | Preeti | 289 | B.Sc (H) I Yr |
| 41 | Reenu | 1416 | B.Sc (H) I Yr |
| 42 | Richa Singh | 37 | B.Sc (H) I Yr |
| 43 | Ritu | 650 | B.Sc (H) I Yr |
| 44 | Riya | 1344 | B.Sc (H) I Yr |
| 45 | Rubal | 1275 | B.Sc (H) I Yr |
| 46 | Sahiba Khan | 687 | B.Sc (H) I Yr |
| 47 | Sakshi Maan | 50 | B.Sc (H) I Yr |
| 48 | Sarika Singh | 33 | B.Sc (H) I Yr |
| 49 | Saumya Tyagi | 657 | B.Sc (H) I Yr |
| 50 | Savina | 795 | B.Sc (H) I Yr |
| 51 | Shruti Sharma | 51 | B.Sc (H) I Yr |
| 52 | Shubhangi | 749 | B.Sc (H) I Yr |
| 53 | Sneh | 1191 | B.Sc (H) I Yr |
| 54 | Sonali | 641 | B.Sc (H) I Yr |
| 55 | Sonam | 129 | B.Sc (H) I Yr |
| 56 | Suman Kumari Dhangar | 1113 | B.Sc (H) I Yr |
| 57 | Sushma Meena | 525 | B.Sc (H) I Yr |
| 58 | Urvashi Abrol | 1069 | B.Sc (H) I Yr |
| 59 | Vandana Devi | 343 | B.Sc (H) I Yr |
| 60 | Vidhi | 479 | B.Sc (H) I Yr |



| Bridge Course on Lab Safety and Handling of Equipment for First Year Life Science students | | | |
|--|-----------|--------------------|----------------|
| S. No. | Roll no. | Name | Course Name |
| 1 | 2018/913 | AANCHAL | B.Sc (LS) I yr |
| 2 | 2018/475 | AANCHAL KURUP | B.Sc (LS) I yr |
| 3 | 2018/1082 | AARTI YADAV | B.Sc (LS) I yr |
| 4 | 2018/1373 | AMISHA | B.Sc (LS) I yr |
| 5 | 2018/1334 | ANUSHREE KATARIA | B.Sc (LS) I yr |
| 6 | 2018/1242 | BALWANT KAUR | B.Sc (LS) I yr |
| 7 | 2018/1280 | DISHA CHAUDHARY | B.Sc (LS) I yr |
| 8 | 2018/279 | EVA ADHIKARI | B.Sc (LS) I yr |
| 9 | 2018/901 | GARIMA SINGH | B.Sc (LS) I yr |
| 10 | 2018/2 | GUNJAN GOYAL | B.Sc (LS) I yr |
| 11 | 2018/1149 | KASHISH | B.Sc (LS) I yr |
| 12 | 2018/1314 | LAVINA MULANI | B.Sc (LS) I yr |
| 13 | 2018/1352 | MEGHA JAIN | B.Sc (LS) I yr |
| 14 | 2018/1431 | MEHUL CHABRI | B.Sc (LS) I yr |
| 15 | 2018/172 | MONIKA KATARIA | B.Sc (LS) I yr |
| 16 | 2018/646 | NITIKA | B.Sc (LS) I yr |
| 17 | 2018/1221 | NITIKA CHANDRA | B.Sc (LS) I yr |
| 18 | 2018/162 | PRAGYA TIWARY | B.Sc (LS) I yr |
| 19 | 2018/1364 | PRAZVEE SINGH | B.Sc (LS) I yr |
| 20 | 2018/229 | PREETI PAWAR | B.Sc (LS) I yr |
| 21 | 2018/1443 | ROBIA KSHETRIMAYUM | B.Sc (LS) I yr |
| 22 | 2018/1442 | SAKSHI MEHTA | B.Sc (LS) I yr |
| 23 | 2018/1405 | SAKSHI PHOGAT | B.Sc (LS) I yr |
| 24 | 2018/913 | AANCHAL | B.Sc (LS) I yr |
| 25 | 2018/475 | AANCHAL KURUP | B.Sc (LS) I yr |
| 26 | 2018/1082 | AARTI YADAV | B.Sc (LS) I yr |
| 27 | 2018/1373 | AMISHA | B.Sc (LS) I yr |
| 28 | 2018/1334 | ANUSHREE KATARIA | B.Sc (LS) I yr |
| 29 | 2018/1242 | BALWANT KAUR | B.Sc (LS) I yr |
| 30 | 2018/1280 | DISHA CHAUDHARY | B.Sc (LS) I yr |
| 31 | 2018/279 | EVA ADHIKARI | B.Sc (LS) I yr |
| 32 | 2018/901 | GARIMA SINGH | B.Sc (LS) I yr |
| 33 | 2018/2 | GUNJAN GOYAL | B.Sc (LS) I yr |
| 34 | 2018/1149 | KASHISH | B.Sc (LS) I yr |



D S Kothari Centre for Research and Innovation in Science Education

Miranda House, University of Delhi





Bridge Course Laboratory Safety and Handling of Equipment

Arreita J. Sheikh

Dr. Amrita T Sheikh

Teacher-in-Charge
Department of Chemistry

halltha Tolly

Dr. Pratibha Jolly Principal, Miranda House Pl, D S Kothari Centre

D S Kothari Centre for Research and Innovation in Science Education

Miranda House, University of Delhi





Bridge Course Laboratory Safety and Handling of Equipment

This is to certify that ... Pooja Meena ... of B.Sc. (H) Chemistry, I Semester, Miranda House has successfully participated in the Bridge Course on Laboratory Safety and Handling of Equipment held on 2nd and 3nd August 2018 organized by Department of Chemistry, Miranda House, University of Delhi.

Amuita J. Sheikh
Dr. Amrita T Sheikh
Teacher-in-Charge
Department of Chemistry

Dr. Pratibha Jolly
Principal, Miranda House
Pl. D S Kothari Centre

D S Kothari Centre for Research and Innovation in Science Education

Miranda House, University of Delhi





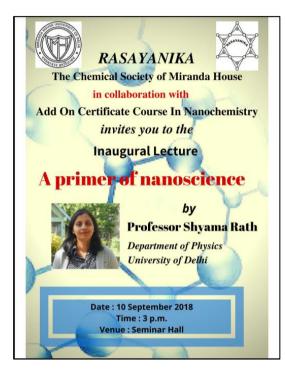
Bridge Course Laboratory Safety and Handling of Equipment

This is to certify that Bhumika Rani of B.Sc. (H) Clumistry, I Semester,
Miranda House has successfully participated in the Bridge Course on Laboratory Safety and
Mandling of Equipment held on 2" and 3" August 2018 organized by Department of Chemistry,
Miranda House, University of Delhi.

Amrita J. Sheikh Dr. Amrita T Sheikh Teacher-in-Charge Department of Chemistry halibha Jolly Dr. Pratibha Jolly Principal, Miranda House Pl, D S Kothari Centre

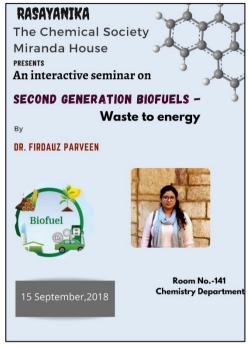


The joint **inaugural talk of** *Rasayanika* **the Chemical Society** and the Add-on certificate Course on Nanochemistry was delivered on 10 September 2018 by Professor Shyama Rath, Department of Physics, University of Delhi. The talk, titled *A Primer of Nanoscience*, a fitting beginning to the course on Nanochemistry, provided exposure to the students on a topic of enormous current interest.

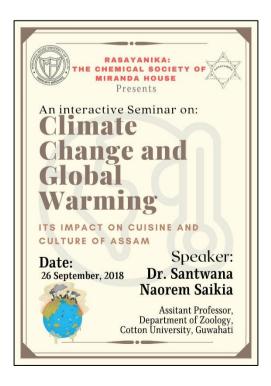




The Department of Chemistry organized Interactive Seminar: Second Generation Biofuels – Waste to Energy by Dr Firdauz Parveen, Department of Chemistry, Miranda House on 15 September, 2018.



Seminar: Climate Change and Global Warming – Its impact on Cuisine and Culture of Assam by Dr. Santwana Naorem Saikia, Asst. Prof., Dept. of Zoology, Cotton University, Guwahati

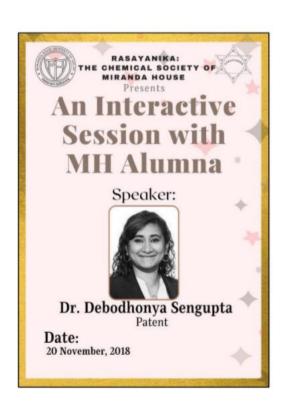




MH alumna Ms Ramya Srinivasan, who spoke on *Life after Miranda House* on 8 January 2019, enlightened the current students about the pros and cons of applying abroad for higher studies in Chemistry. These talks helped the students in exploring new horizons in Chemistry



Another interactive session with Dr Debodhonya Sengupta, who spoke with the students on 20 November 2018, recounted her journey from Chemistry Honours in Miranda House to her present occupation of Patent Attorney in the US.





GWB-2019-The Department of Chemistry organized a Symposium on *Empowering Women in Chemistry* as a part of the Centenary Celebration of the International Union of Pure and Applied Chemistry (IUPAC) on 12 February 2019. The symposium was held under the aegis of DSKC and was sponsored by Department of Science and Technology (DST), Defense Research and Development Organization (DRDO) and Department of Biotechnology (DBT), Government of India. Many organizations all over the world participated in *IUPAC 100* celebration including Miranda House as a leading Partner Institution from India. The first event of the day was a *Global Women's Breakfast*, a global networking event launched in real time around the world, starting in New Zealand, with the final events occurring in the Pacific Region. Miranda House was privileged to host a Panel Discussion as the Breakfast Event, with eminent invited panellists Padma Bhushan Dr. Manju Sharma, Professor Rita Kakkar, Professor Ruchi Anand and Professor Shailja Singh. The women scientists on the Panel had fruitful interaction with the enthusiastic audience. Four of the panelists later gave talks related to their own fields of research.





The IUPAC Global Breakfast event also commemorated the International Day of Women and Girls in Science – 11 February. This special day aims to increase awareness about the important role that women and girls can, and do, play in science and technology. Our invited speakers

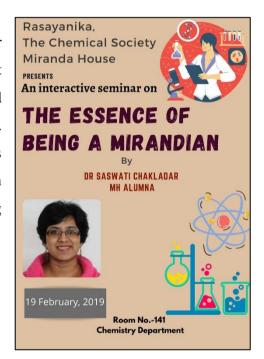


emphasized this very important and critical point to the audience which consisted mainly of girls and women.

Video Link of the event: https://youtu.be/lriHerQASaI

Video Link #2: https://youtu.be/Tbz1QgcU7FY

The Essence of Being a Mirandian was the topic of alumna Dr Saswati Chakladar's talk on 19 Feb 2019. Students felt encouraged to hear that their training in Miranda House ensured that they would be able to take everything in their stride in future. These sessions with alumnae gave wide exposure to students about the possible openings for a Chemistry graduate from Miranda House and also imparted a sense of pride in being students of such a prestigious institution.



Department of Chemistry organised a talk on *Lead Identification with Molecular Docking and Biomolecular Simulations* by Dr. Whelton Miller from Lincoln University USA on 22 February





Department of Chemistry organised an enjoyable interactive session on *The Joy of Learning* on 25 February 2019 with Professor Puspendu K. Das from the Indian Institute of Science (IISc) Bengaluru.



Research Visit/Interaction: Dr R. Krishanappa and Dr Puran Chandra, Senior Scientists, ICAR Meghalaya visited the Department in as collaborators under the DBT Research Project with Dr Kalawati Saini in DBT Twinning Programme.





Part B.3

Any other event organized as part of students' activities (not listed above)

Miranda House organised **a trip to the Regional Centre for Biotechnology** (**RCB**) to attend the RCB Open Day Outreach Program under India International Science Festival on 24 September 2018. RCB had organised different activities and talks by eminent scientists such as Professor Sudhanshu Vrati, Dr. Avinash Bajaj and others with the aim to expose students to the research going on in India and to motivate them to take up research in the government sector as a future career option.







Competitions like Scientific Model-making, Sci-Toon, Science Questionnaires etc. which enhanced students' knowledge were also conducted. Six Chemistry students, accompanied by faculty member Dr. Poonam, were members of the MH contingent.

A group of 53 students from across all three years of Chemistry Honours accompanied by faculty members Dr. Rajeswari and Dr. Shivani and laboratory staff Mr. Ravi and Mr. Vijay, along with a group of Botany Honours students and faculty members,

went on an educational cum sightseeing trip to Dalhousie, Khajjiar and McLeod Ganj in early October. It was a great learning experience for the students to visit Ayuskama Ayurveda Institute which is a leading Ayurveda school in North India.



The visitors were briefed about the advantages of Ayurveda over other branches of medicine and Ayurveda based treatments offered by the institute for a range of diseases. The group also went for sightseeing of popular tourist destinations in the area including Chamera Dam; Khajjiar Lake; Dharamshala Tea Gardens and Cricket Ground and Bhagsunath Falls.







Three lead-up students' competitions for IUPAC 100 were organised by *Rasayanika*, the Miranda House Chemical Society on 10 and 11 January 2019 with an objective of bringing together creative young minds. The first lead-up event held on 10 January 2019 was *Eureka: The Inter-College Science Paper Presentation and Poster Presentation* competition.

The event saw participation from different colleges on given topics like The Periodic Table over the Years, Life and Work of an Extraordinary Woman Chemist, Frontiers of Chemical Research etc. The papers and posters were highly appreciated and prizes were given. The other two events were 11 January. Prayog was the lab work competition while SciQuiz was a filmbased quiz. In keeping with the theme of Empowering Women, the participants of SciQuiz watched a short documentary film based on the life of Rosalind Franklin, one of the contributors to the elucidation of DNA structure and then took a quiz based on it. The event proved to be very successful with good participation.



Prayog and SciQuiz which were held on based on the life of Rosalind Franklin, one of the contributors to the elucidation of DNA structure and then took a quiz based on it. The event proved to be very successful with good participation.



The Department hosted a **Freshers' party** for the incoming batch of 2018-2019 in the month of August 2018. The event huge participation.



Teachers' Day was celebrated on 5 September by Chemistry students, who brought a cake which was cut jointly by students and faculty. The students also gave each teacher a small token of appreciation.

The Farewell party of the outgoing batch of 2019 was held on 28-01-2019. All the teachers wished the outgoing students good luck for their future endeavors. It was then followed by few performances by the juniors and some interesting games for seniors.







Awards and recognition received

Many Chemistry students have been recipients of a variety of scholarships in this academic session such as INSPIRE Scholarship from DST; JKPMS Scholarship Scheme by AICTE; Jammu State Scholarship; Punjab State Scholarship and Promotion of Science Education Haryana State Scholarship.

A number of prestigious College awards went to Chemistry students including the:

- 1. Ekta of B.Sc. (H) batch graduating in 2018 secured third position in the University
- 2. Chinky Kochar secured second position in the University in the M.Sc.
- 3. Priyanka Jain of III Year for the prestigious Golden Jubilee Award
- 4. Asha Pandey got the Certificate of Appreciation.
- 5. Chetna received the Certificate of Appreciation for Excellence in II Year.
- 6. Priyanka Jain has also got the Science Award 2018-19.